

## **System and Method for Examining, Recording and Analysing Dermatological Conditions**

### **Abstract of the Disclosure**

10 A system for collecting, storing and displaying dermatological images for the purpose of monitoring and diagnosis of skin conditions and skin cancers, including melanoma. A hand-held unit illuminates a section of the patient's skin, and an imaging device generates imaging signals from light derived from a skin section. Pairs of light output ports in the hand-held unit are arranged such that their intensity distributions overlap at their half-intensity levels so that the resulting summation of their intensities has a flat central region. Three image stores are maintained, one for lesion images, one for "nearby skin" images, and one for reference-white images. The "nearby skin" images are used by the system software to automatically determine the skin/lesion border. The reference white images are used to set the dynamic range of the instrument and to compensate for lighting irregularities. Two images of the same lesion taken at different times may be displayed  
20 simultaneously so that changes in the lesion may be determined. The calibration system is designed so that image data taken on any of multiple machines built to the same specification will be corrected back to a common reference standard to ensure absolute accuracy in colour rendition.